

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claims 1-11 (canceled).

12. (new): A servo controller comprising:

a position feedback correction unit for correcting a position feedback signal by adding a between-axes positional deviation, filtered and gained, that is the difference between a self-axis position and an other-axis position, to the gained self-axis position;

a position control unit for performing, according to a corrected position feedback signal outputted from the position feedback correction unit, positional control to output a velocity command; and

a velocity control unit for outputting a feedback torque command based on the velocity command outputted from the position control unit, and on the self-axis velocity.

13. (new): A servo controller according to claim 12, wherein, in the position feedback correction unit, the gain applied to the between-axes positional deviation is set at a negative value during operational stops, and is set at a positive value during operational runs.

14. (new): A servo controller according to claim 13, further comprising a velocity feedback correction unit for correcting a velocity feedback signal by adding a between-axes velocity deviation, filtered and gained, that is the difference between the self-axis velocity and the other-axis velocity, to the gained self-axis velocity;

wherein the velocity control unit outputs a feedback torque command based on the velocity command outputted from the position control unit, and on a corrected velocity feedback signal outputted from the velocity feedback correction unit.

15. (new): A servo controller according to claim 12, further comprising a velocity feedback correction unit for correcting a velocity feedback signal by adding a between-axes velocity deviation, filtered and gained, that is the difference between the self-axis velocity and the other-axis velocity, to the gained self-axis velocity;

wherein the velocity control unit outputs a feedback torque command based on the velocity command outputted from the position control unit, and on a corrected velocity feedback signal outputted from the velocity feedback correction unit.

16. (new): A servo controller comprising:

a position feedback correction unit for correcting a position feedback signal by adding a self-axis position filtered through a high-pass filter and an other-axis position filtered through a low-pass filter;

a position control unit for performing, according to a corrected position feedback signal outputted from the position feedback correction unit, positional control to output a velocity command; and

a velocity control unit for outputting a feedback torque command based on the velocity command outputted from the position control unit, and on the self-axis velocity.

17. (new): A servo controller according to claim 16, further comprising a velocity feedback correction unit for correcting a velocity feedback signal by adding a self-axis velocity filtered through a high-pass filter and an other-axis velocity filtered through a low-pass filter;

wherein the velocity control unit corrects the velocity feedback signal based on the velocity command outputted from the position control unit, and on a corrected velocity feedback signal outputted from the velocity feedback correction unit.

18. (new): A servo controller comprising:

a reference model control unit for calculating, based on a position command, a model position and a model acceleration for simulating an ideal movement for a machine;

a position control unit for performing, according to the difference between the model position and a self-axis position, positional control to output a velocity command;

a velocity control unit for outputting a feedback torque command based on the velocity command outputted from the position control unit, and on the self-axis velocity;

a model torque correction unit for correcting, according to the self-axis position and an other-axis position, the model acceleration to calculate a model torque; and
an accumulator for calculating a torque command based on the model torque and the feedback torque command.

19. (new): A servo controller according to claim 18, wherein:

the reference model control unit is further for calculating, based on the position command, a model velocity for simulating an ideal movement for the machine; and

the velocity control unit outputs the feedback torque command based on the velocity command outputted from the position control unit, on the model velocity, and on the self-axis velocity.

20. (new): A servo controller according to claim 19, wherein, in the model torque correction unit, in accordance with time or with a waveform of the velocity command, the correction unit's correction operation is started and stopped, or correction gains are changed.

21. (new): A servo controller according to claim 20, wherein, the model torque correction unit calculates the model torque by correcting the model acceleration further based on the sign of the model acceleration.

22. (new): A servo controller according to claim 18, wherein, in the model torque correction unit, in accordance with time or with a waveform of the velocity command, the correction unit's correction operation is started and stopped, or correction gains are changed.

23. (new): A servo controller according to claim 22, wherein, the model torque correction unit calculates the model torque by correcting the model acceleration further based on the sign of the model acceleration.

24. (new): A servo controller according to claim 18, wherein, the model torque correction unit calculates the model torque by correcting the model acceleration further based on the sign of the model acceleration.

25. (new): A servo controller comprising:

- a reference model control unit for calculating, based on a position command, a model position and a model acceleration for simulating an ideal movement for a machine;

- a position feedback correction unit for correcting a position feedback signal based on a self-axis position and an other-axis position;

- a position control unit for performing, according to the difference between the model position and a corrected position feedback signal outputted from the position feedback correction unit, positional control to output a velocity command;

a velocity feedback correction unit for correcting a velocity feedback signal based on the self-axis velocity and the other axis-velocity;

a velocity control unit for outputting a feedback torque command based on the velocity command outputted from the position control unit, and on a corrected velocity feedback signal outputted from the velocity feedback correction unit;

a model torque correction unit for correcting, according to an other-axis model acceleration, to the self-axis position, and to the other-axis position, the model acceleration, to calculate a model torque; and

an accumulator for calculating a torque command based on the model torque and the feedback torque command.

26. (new): A servo controller according to claim 25, wherein:

the reference model control unit is further for calculating, based on the position command, a model velocity for simulating an ideal movement for the machine for simulating an ideal movement for the machine; and

the velocity control unit outputs the feedback torque command based on the velocity command outputted from the position control unit, on the model velocity, and on the corrected velocity feedback signal outputted from the velocity feedback correction unit.